

# The Dalles Dam Fishway Status Report

10/10/21

Inspection Period:10/3-10/9/2021

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
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<b>The Dalles Dam</b>	<b>Inspections OOC</b>	<b>Criteria Limit</b>	<b>Total Number of Inspections:</b> 18		<b>Temperature:</b> 64.7 °F	
			<b>Comments:</b> East ladder passing most fish.		<b>Weekly Ave. Secchi:</b> 5.4	

### NORTH FISHWAY

Exit differential	0	≤ 0.5'		
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.0' ± 0.1'		
Entrance weir N1	0	1.0' - 2.0'	Weekly average	9.7
Entrance Differential	0	depth (≥ 8')	Weekly average	1.3
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		

### EAST FISHWAY

Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay		
Weir 158-159 differential	0	1.1' ± 0.1'		
Count station differential	0	≤ 0.3'		
153 Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	> 7.0'		
East entrance differential	1	1.0' - 2.0'		
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')		
Entrance weir E3	0	depth (≥ 8')		
Collection channel velocity	0	1.5 - 4 fps	2.61 fps 10/09/21 fps, fastest 3.07 MU1, slowest 2.21 MU19	
Transportation channel velocity	0	1.5 - 4 fps	2.57 fps 10/9/21	
North channel velocity	0	1.5 - 4 fps	2.6 fps 10/09/21	
South channel velocity	0	1.5 - 4 fps	3.8 fps 10/9/21	
West entrance differential	0	1.0' - 2.0'	Old SCADA	Week ave. 1.6
Entrance weir W1	0	depth (≥ 8')		Week ave. 10.0
Entrance weir W2	0	depth (≥ 8')		Week ave. 10.0
Entrance weir W3	0	No criteria	Closed	
South entrance differential	0	1.0' - 2.0'		Week ave. 1.5
Entrance weir S1	0	depth (≥ 8')		Week ave. 9.1
Entrance weir S2	0	depth (≥ 8')		Week ave. 9.3

### JUVENILE PASSAGE

Sluicgate operation	0	Units 1,8, 18	Gates over MU1/1-2-3, moved to MU4, MU8/1-3,MU18-2 open	
Turbine trashrack drawdown	0	<1.5', biwklly	10/10/21, all gatewells in criteria.	
Spill volume/pattern	0	1 to 8	Spill closed 9/1/21	
Turbine Unit Priority	14	per FPP	Mus 1-3 OOS due to crane rail replacement work.	
Gatewells	0	Weekly	No fish present. No mortality 10/9/2021.	

## OTHER ISSUES:

### Current Unit Outages

- MU3 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- MU2 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- MU1 OOS 0630 9/20/2021 – 1700 10/28/2021 for Crane Rail Replacement
- T10 (MU19 & 20) FOOS through 10/27/2022 due to acetylene levels
- MU12 OOS 0001 4/12/2021 – 1700 10/27/2022 for Annual & Cooler Upgrades
- MU15 OOS 0630 8/2/2021 – 1700 11/14/2021 for Overhaul, Top Plate, Strainer, & T8 Doble Testing
- MU16 OOS 0001 8/2/2021 – 1700 11/14/2021 for Annual, Strainer, & T8 Doble Testing
- MU19 OOS 0630 6/27/2021 – 1700 10/27/2022 for Top Plate Cover Upgrade
- SS02 OOS 10/04/2021 0001 - 10/14/2021 1700 Gov. Oil Leak Repair

### Maintenance

Fish unit bus overheating problem resolved. Both fish units operating on single line.

Spillway assessment (MRER); Spillgates 1- 9 rehab date estimate 2034. Includes replacement of spillbay 9 trunnion pin repair

PUD intake rake in service with temporary power. Transferring rake operation and maintenance to N Wasco PUD in progress.

5 of 6 east fishway collection channel dewatering pumps installed. Repair and install planned.

Fishway automation replacement on hold. East exit, east and south entrances complete. West and north on old system. Resume this winter.

North fish differential sending invalid signal to SCADA at intermittent times. Should be upgraded this winter.

Calibrations: All openings in criteria. Upgrade to new software improving performance. South entrance gates S-1 and S-2 out of calibration.

Permanent oil boom removed from east exit for repairs. Possible redesign before install.

### Predators

Cormorants fishing entrances and in SW2 & 3, gulls foraging at shad and lamprey hotspots, Mergansers also a regular.

### Research/Construction/Contractors

4 Peaks fish counting continues

AWS intake trashrack- No funding FY22.

Investigating MOP operation at fishways.

Fish Accords Lamprey Passage plan for The Dalles ongoing at 30% DDR. Looking at feasibility of Lamprey Passage Structure at junction pool, with holding tank.

PITAGS north and east fishladder data collection at count stations continues.

Fish unit rehab - Phase 1A on hold. Date to be determined. Planning operation with AWS backup water supply during construction.

Northern Pikeminnow Management Program season concluded w/1384 native pikeminnow removed YTD

PUD removing debris from loaction where a new juvenile sampling facility will be constructed prior to upcoming fish season 2021/2022

USDA concluded Piscivorous bird hazing

Crane rail replacement underway on intake deck units 1-4. Sluiceways unit 1 moved to unit 4 open.

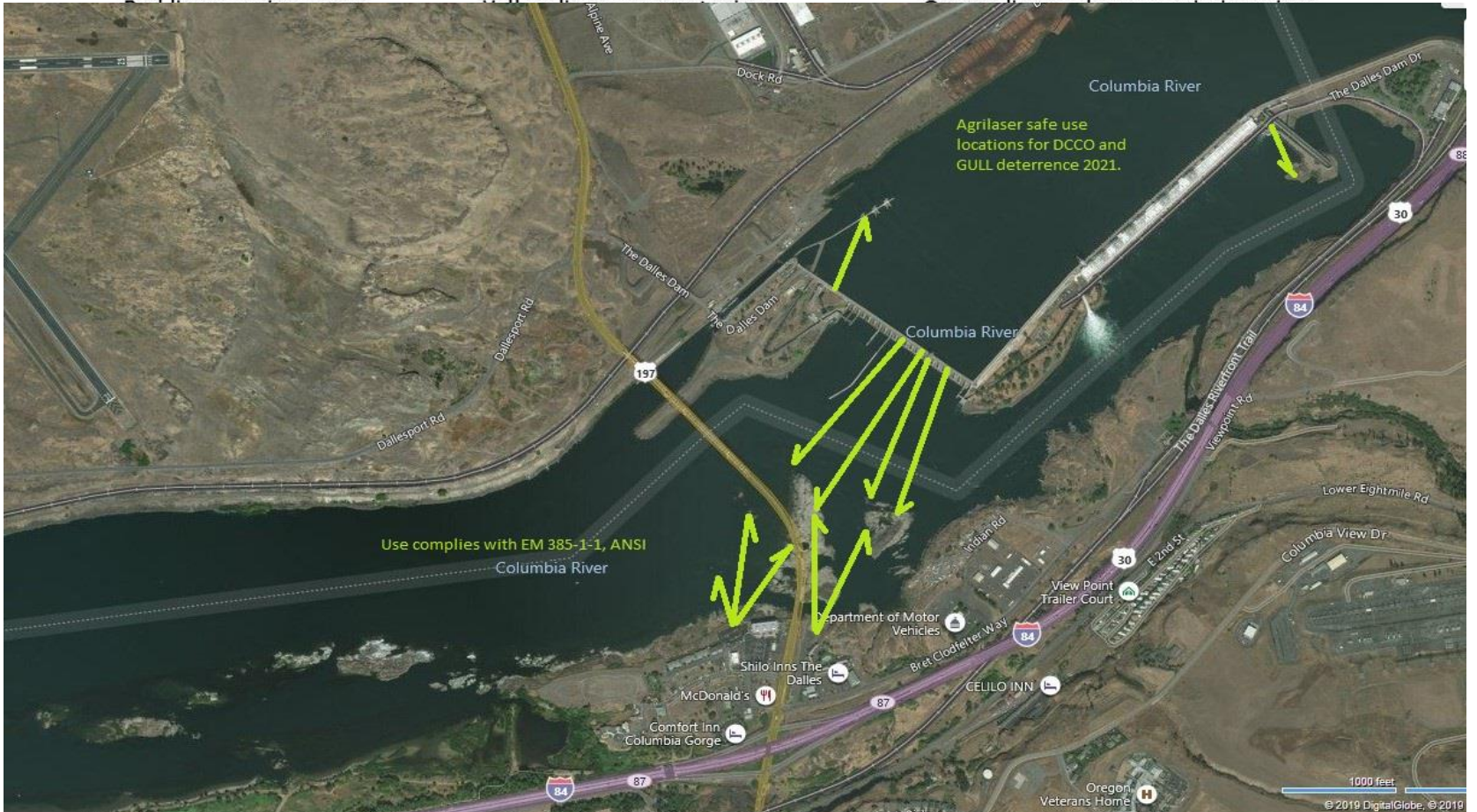
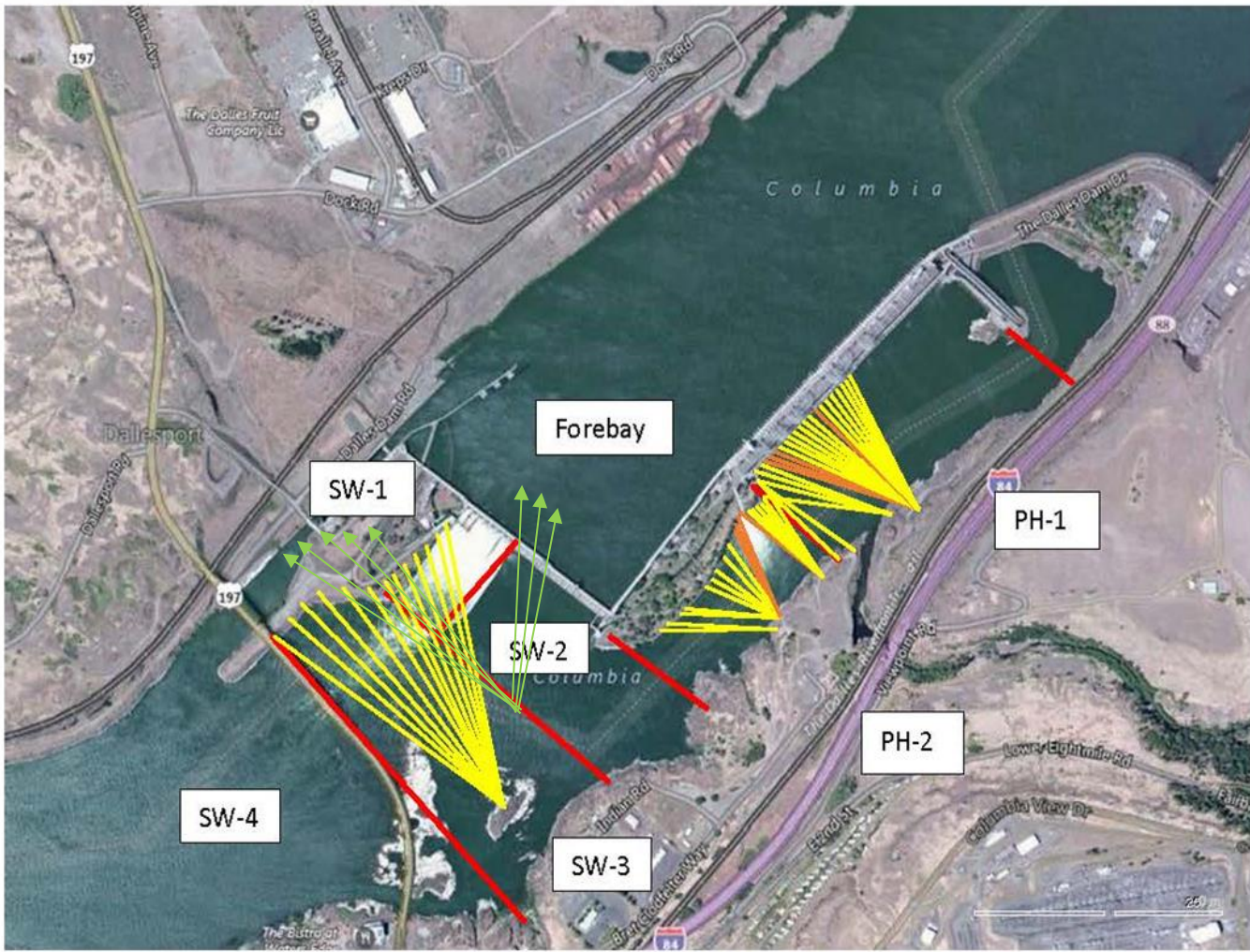
### Fishway Operations

Ice Trash sluiceway opened 24/7. MU4/1-2-3, MU 8/1-2, MU18/2 Sluice openings move to 4 due to concrete-crainrail removal

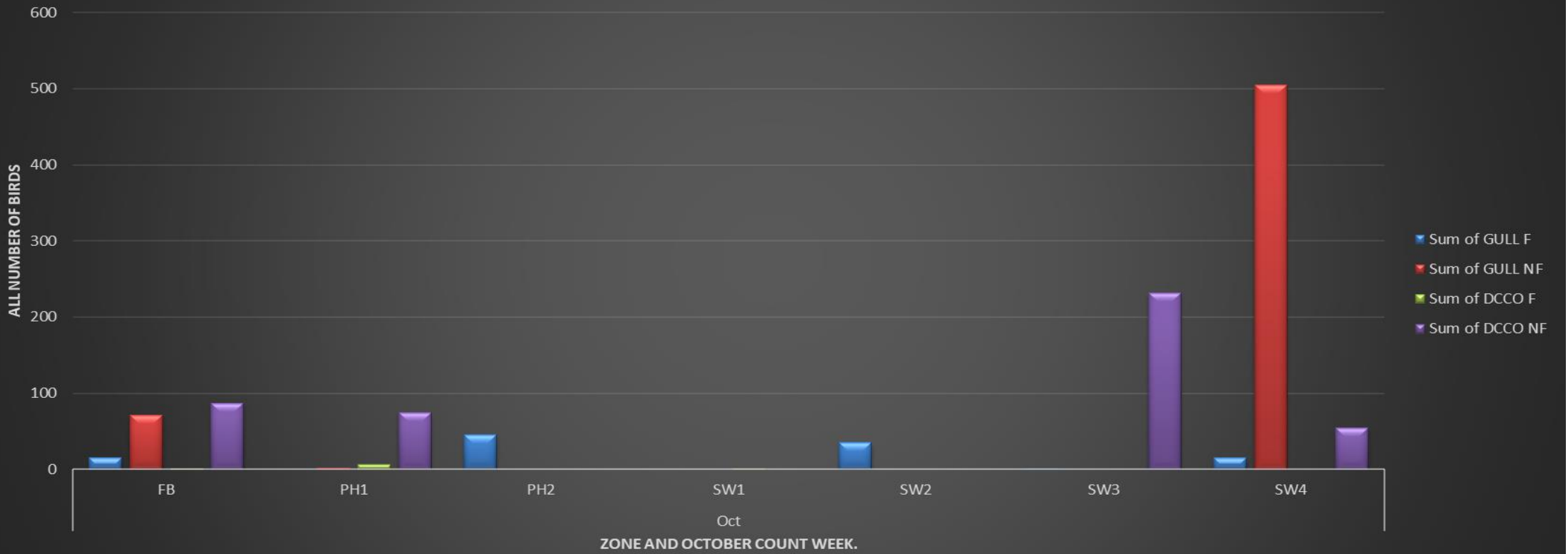
East and north fish ladders in full operation per Fish Passage Plan.

Approved by: Ron Twiner, Operation Project Manager, The Dalles Dam

New Avian Lines and laser deterrent zones

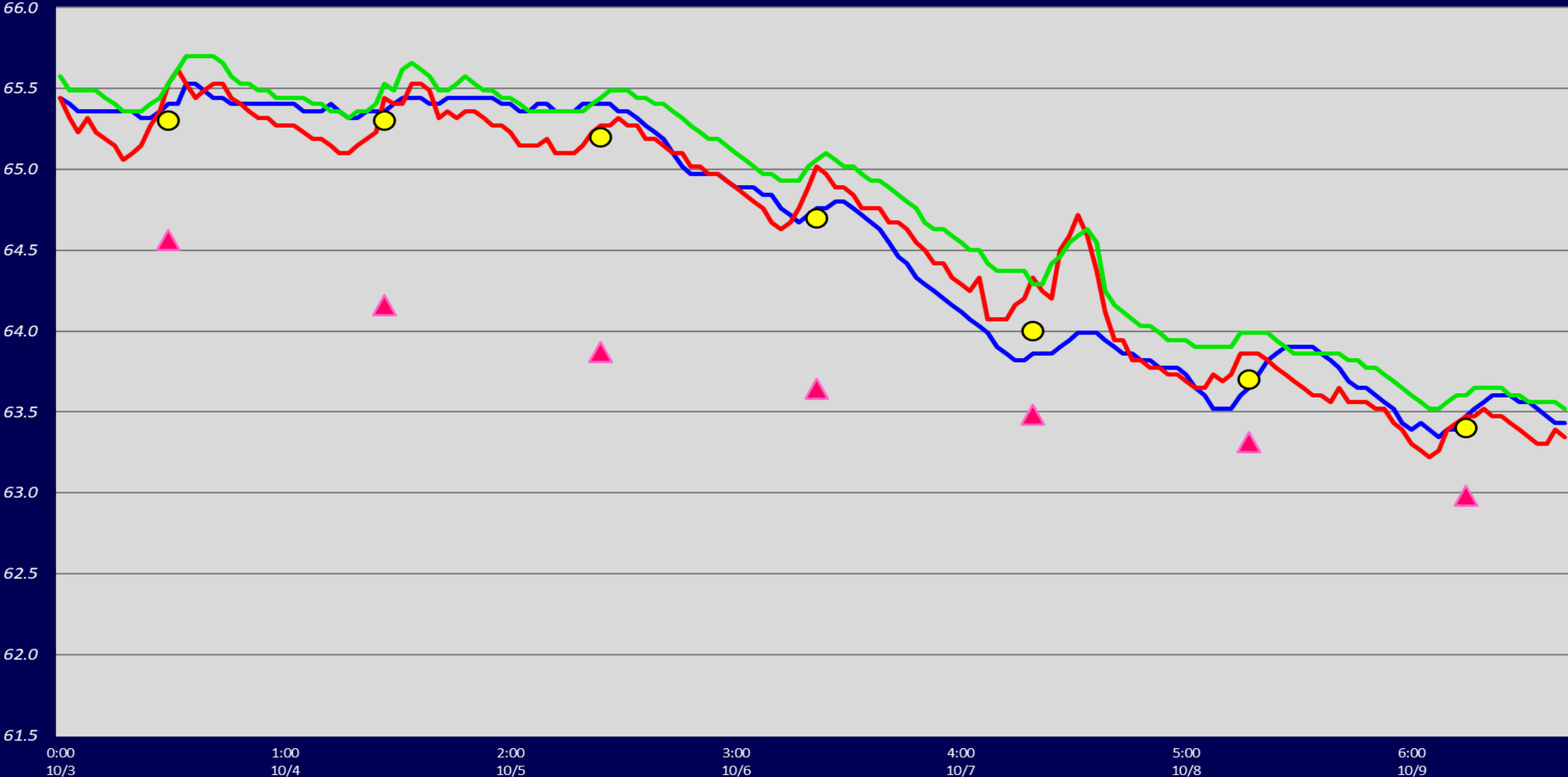


### Avian predators at the Dalles dam by zone from Oct. 3rd to Oct. 10th, 2021



# Adult Fish Ladders-River Temperatures

— East Count Station    — North Count Station    — North Entrance    ● Current USGS Daily Average    ▲ USGS Daily Average (2007-2020)



Secchi:		USGS°F
5.0	Sun	65.3
5.0	Mon	65.3
5.0	Tue	65.2
5.0	Wed	64.7
6.0	Thurs	64.0
6.0	Fri	63.7
6.0	Sat	63.4
5.4	median	64.7

The Dalles Dam Daily Readings and Averages for  
Temperatures, Secchi, Entrances, and Spill

E1 and W3 no criteria  
out of criteria

Date:	North Ladder		East Ladder											
	Differential	N1 Depth	East Entrance					West Entrance				South Entrance		
			Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1	W2	W3	Differential	S1	S2
10/3	1.2	9.8	1.7	7.3	11.4	11.4	10.3	1.7	9.9	9.9	-2.4	1.4	9.1	9.3
	1.3	9.7	1.7	7.3	11.4	11.4	10.3	1.5	9.9	9.9	-2.4	1.5	9.1	9.3
10/4	1.2	9.6	1.7	7.5	11.6	11.6	10.5	1.5	10.0	10.0	-2.4	1.6	8.8	9.1
	1.3	9.7	1.8	7.2	11.2	11.8	10.2	1.6	10.0	10.0	-2.5	1.6	8.9	9.1
10/5	1.3	9.6	1.7	7.4	11.4	11.4	10.3	1.7	9.9	9.9	-2.4	1.5	8.9	9.2
	1.2	9.8	1.5	7.7	11.8	11.8	10.7	1.6	10.0	9.9	-2.5	1.5	9.3	9.3
10/6	1.3	9.7	1.6	7.6	11.7	11.7	10.5	1.6	9.9	9.9	-2.1	1.5	9.2	9.4
	1.3	9.6	0.7	8.3	12.4	12.3	11.3	1.5	10.0	10.0	-2.4	1.5	9.0	9.3
10/7								1.6						
	1.3	9.6	1.2	8.3	12.3	12.3	11.2	1.6	10.0	10.1	-1.8	1.4	9.5	9.8
10/8								1.5						
	1.3	9.7	1.3	10.0	12.1	12.1	11.0	1.6	10.0	10.0	-1.9	1.4	9.4	9.6
10/9	1.4	10.7	1.4	8.0	11.0	11.0	11.0	1.5	10.0	10.0	-1.8	1.3	10.0	10.3
								1.5						
10/9	1.3	9.6	1.6	7.2	11.4	11.5	10.2	1.5	10.2	10.2	-2.4	1.5	8.9	9.1
	1.2	9.7	1.7	7.0	11.2	11.2	10.0	1.5	10.1	10.1	-2.8	1.6	8.6	8.8
<b>AVG:</b>	<b>1.3</b>	<b>9.7</b>	<b>1.5</b>	<b>7.7</b>	<b>11.6</b>	<b>11.6</b>	<b>10.5</b>	<b>1.6</b>	<b>10.0</b>	<b>10.0</b>	<b>-2.3</b>	<b>1.5</b>	<b>9.1</b>	<b>9.3</b>

*Fishways are inspected twice daily. Overnight trend monitored via Old SCADA operating at west entrance.*



Fall chinook going over the top of weir 159 at the Dalles east ladder exit.